



US00PP34889P2

(12) **United States Plant Patent**
van Dijk

(10) **Patent No.:** **US PP34,889 P2**

(45) **Date of Patent:** **Jan. 3, 2023**

(54) **HYDRANGEA PLANT NAMED ‘HI HORIZON’**

CPC A01H 5/02
See application file for complete search history.

(50) Latin Name: *Hydrangea macrophylla*
Varietal Denomination: **HI HORIZON**

(56) **References Cited**

(71) Applicant: **Roy Robin van Dijk**, De Lier (NL)

PUBLICATIONS

(72) Inventor: **Roy Robin van Dijk**, De Lier (NL)

PLUTO UPOVROM Citation for ‘HI HORIZON’ as per JP PBR 34797; Dec. 24, 2020; 1 page.*

(73) Assignee: **HI BREEDING B.V.**, De Lier (NL)

* cited by examiner

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Primary Examiner — Kent L Bell

(21) Appl. No.: **17/688,770**

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(22) Filed: **Mar. 7, 2022**

(57) **ABSTRACT**

(51) **Int. Cl.**
A01H 5/02 (2018.01)
A01H 6/48 (2018.01)

A new and distinct cultivar of *Hydrangea* plant named ‘HI HORIZON’, characterized by its upright and broadly spreading plant habit; moderately vigorous and moderate growth rate; freely branching habit; strong and sturdy stems; freely flowering habit; large and dense inflorescences with purplish red-colored sterile flowers; and good post-production longevity.

(52) **U.S. Cl.**
USPC **Plt./250**
CPC *A01H 6/48* (2018.05)

(58) **Field of Classification Search**
USPC Plt./250

3 Drawing Sheets

1

2

Botanical designation: *Hydrangea macrophylla*.
Cultivar denomination: ‘HI HORIZON’.

Netherlands. The objective of the breeding program is to create new sturdy and strong *Hydrangea* plants with attractive inflorescences and good postproduction longevity.

STATEMENT REGARDING PRIOR
DISCLOSURES BY INVENTOR/APPLICANT &
ASSIGNEE

The new *Hydrangea* plant originated from a cross-pollination on Apr. 14, 2015 of a proprietary selection of *Hydrangea macrophylla* identified as code number 1560, not patented, as the female, or seed, parent with a proprietary selection of *Hydrangea macrophylla* identified as code number 1562, not patented, as the male, or pollen, parent. The new *Hydrangea* plant was discovered and selected as a single flowering plant from within the progeny of the stated cross-pollination in a controlled greenhouse environment in De Lier, The Netherlands on Apr. 4, 2017.

A Japanese Plant Breeder’s Rights application for the instant plant was filed by the Applicant/Assignee of the instant application, Hi Breeding B.V. of De Lier, The Netherlands on Jun. 26, 2020, application number 34797. Foreign priority is not claimed to this Japanese Plant Breeder’s Rights application.

Asexual reproduction of the new *Hydrangea* plant by terminal vegetative cuttings since Jun. 11, 2017 in a controlled greenhouse environment in De Lier, The Netherlands has shown that the unique features of this new *Hydrangea* plant are stable and reproduced true to type in successive generations of asexual reproduction.

The Inventor/Applicant and Assignee assert that no publications nor advertisements relating to sales, offers for sale or public distribution occurred more than one year prior to the effective filing date of this application. Any information about the claimed plant would have been obtained from a direct or indirect disclosure from the Inventor/Applicant and/or the Assignee. Inventor/Applicant and Assignee claim a prior art exception under 35 U.S.C. 102(b)(1) for disclosure and/or sales prior to the filing date but less than one year prior to the effective filing date.

SUMMARY OF THE INVENTION

BACKGROUND OF THE INVENTION

Plants of the new *Hydrangea* have not been observed under all possible combinations of environmental conditions and cultural practices. The phenotype may vary somewhat with variations in environmental conditions such as temperature and light intensity without, however, any variance in genotype.

The present invention relates to a new and distinct cultivar of *Hydrangea* plant, botanically known as *Hydrangea macrophylla*, commercially referred to as a mophead-type *Hydrangea* and hereinafter referred to by the name ‘HI HORIZON’.

The following traits have been repeatedly observed and are determined to be the unique characteristics of ‘HI HORIZON’. These characteristics in combination distinguish ‘HI HORIZON’ as a new and distinct *Hydrangea* plant:

The new *Hydrangea* plant is a product of a planned breeding program conducted by the Inventor in De Lier, The

1. Upright and broadly spreading plant habit.
 2. Moderately vigorous and moderate growth rate.
 3. Freely branching habit.
 4. Strong and sturdy stems.
 5. Freely flowering habit.
 6. Large and dense inflorescences with purplish red-colored sterile flowers.
 7. Good post-production longevity.
- Plants of the new *Hydrangea* can be compared to plants of the female parent selection. Plants of the new *Hydrangea* differ primarily from plants of the female parent selection in the following characteristics:

1. Plants of the new *Hydrangea* are not as vigorous as plants of the female parent selection.
2. Stems of plants of the new *Hydrangea* are sturdier than stems of plants of the female parent selection.
3. Plants of the new *Hydrangea* are tolerant to *Botrytis* whereas plants of the female parent selection are very susceptible to *Botrytis*.

Plants of the new *Hydrangea* can be compared to plants of the male parent selection. Plants of the new *Hydrangea* differ primarily from plants of the male parent selection in the following characteristics:

1. Stems of plants of the new *Hydrangea* are sturdier than stems of plants of the male parent selection.
2. Sterile flowers of plants of the new *Hydrangea* are firmer than sterile flowers of plants of the male parent selection.

Plants of the new *Hydrangea* can also be compared to plants of *Hydrangea macrophylla* 'HBA 202911', not patented. In side-by-side comparisons, plants of the new *Hydrangea* differ primarily from plants of 'HBA 202911' in the following characteristics:

1. Stems of plants of the new *Hydrangea* are sturdier than stems of plants of 'HBA 202911'.
2. Sterile flowers of plants of the new *Hydrangea* are firmer than sterile flowers of plants of 'HBA 202911'.

BRIEF DESCRIPTION OF THE PHOTOGRAPHS

The accompanying colored photographs illustrate the unique appearance of the new *Hydrangea* plant showing the colors as true as it is reasonably possible to obtain in colored reproductions of this type. Colors in the photographs may differ from the color values cited in the detailed botanical description which accurately describe the colors of the new *Hydrangea* plant.

The photograph on the first sheet (FIG. 1) is a side perspective view of a typical flowering plant of 'HI HORIZON' grown in a container.

The photograph at the top of the second sheet (FIG. 2) is a close-up view of a typical inflorescence of 'HI HORIZON'.

The photograph at the bottom of the second sheet (FIG. 3) is a close-up view of a typical leaf of 'HI HORIZON'.

The photograph on the third sheet (FIG. 4) is a top perspective view of a typical flowering plant of 'HI HORIZON' that has been treated with aluminum sulfate, or "blued".

DETAILED BOTANICAL DESCRIPTION

Plants used in the aforementioned photographs and in the following description were grown during the late autumn and early winter in 14-cm containers in a glass-covered greenhouse in De Lier, The Netherlands and under cultural

practices typical of commercial *Hydrangea* production. During the production of the plants, day temperatures ranged from 20° C. to 35° C., night temperatures ranged from 10° C. to 22° C. and light levels averaged 4,000 lux. Plants of the new *Hydrangea* were pinched one time and were 18 months old when the photographs and description were taken. In the following description, color references are made to The Royal Horticultural Society Colour Chart, 2015 Edition, except where general terms of ordinary dictionary significance are used.

Botanical description: *Hydrangea macrophylla* 'HI HORIZON'.

Parentage:

Female, or seed, patent.—Proprietary selection of *Hydrangea macrophylla* identified as code number 1560, not patented.

Male, or pollen, patent.—Proprietary selection of *Hydrangea macrophylla* identified as code number 1562, not patented.

Propagation:

Type cutting.—By vegetative terminal cuttings.

Time to initiate roots, summer.—About twelve days at temperatures about 22° C.

Time to initiate roots, winter.—About two weeks at temperatures about 20° C.

Time to produce a rooted young plant, summer.—About four weeks at temperatures about 22° C.

Time to produce a rooted young plant, winter.—About one month at temperatures about 19° C.

Root description.—Medium in thickness, fibrous; typically white in color, actual color of the roots is dependent on substrate composition, water quality, fertilizer type and formulation, substrate temperature and physiological age of roots.

Rooting habit.—Moderately freely branching; medium density.

Plant description:

Plant and growth habit.—Upright and broadly spreading plant habit; flattened globular in overall shape; strong and sturdy stems; moderately vigorous growth habit and moderate growth rate; about six months from propagation are required to produce small finished flowering plants.

Plant height.—About 26.6 cm.

Plant diameter or area of spread.—About 46.5 cm.

Lateral branch description:

Branching habit.—Freely branching habit with about eight lateral branches per plant; pinching enhances lateral branch development.

Length.—About 13.8 cm.

Diameter.—About 6 mm.

Internode length.—About 3.8 cm.

Strength.—Strong, sturdy.

Aspect.—About 50° from vertical.

Texture, developing and fully developed.—Smooth, glabrous; becoming woody with subsequent development.

Color, developing.—Close to 146D.

Color, fully developed.—Close to between 143B to 143C and 146C; when woody, close to N199B and 200D.

Lenticels.—Density: Sparse to medium density. Length: About 1.5 mm. Diameter: About 0.5 mm. Color: Close to 182A to 182B.

Leaf description:

Arrangement.—Opposite, simple.

Length.—About 11.1 cm.

Width.—About 7.5 cm.

Shape.—Broadly ovate to broadly elliptic.

Apex.—Apiculate.

Base.—Short attenuate.

Margin.—Serrate to crenate-serrate.

Texture, upper surface.—Slightly rugose, glabrous.

Texture, lower surface.—Moderately rugose, glabrous.

Venation pattern.—Pinnate.

Color.—Developing leaves, upper surface: Close to between 137C and 143A. Developing leaves, lower surface: Close to between 138A and 147B. Fully developed leaves, upper surface: Close to between NN137A and 147A; venation, close to 146D. Fully developed leaves, lower surface: Close to 137C; venation, close to 147D.

Petioles.—Length: About 3.3 cm. Diameter: About 3 mm to 4 mm. Texture and luster, upper and lower surfaces: Smooth, glabrous; moderately glossy. Color, upper surface: Close to 144A. Color, lower surface: Close to between 144A and 146D.

Flower description:

Flower type and habit.—Showy rotate sterile flowers and small, inconspicuous rotate fertile flowers arranged on mophead-type terminal panicles; panicles flattened globular in shape; sterile flowers face upright to outwardly and fertile flowers mostly upright.

Fragrance.—None detected.

Natural flowering season.—In the garden, plants flower continuously from the late spring to late summer in The Netherlands; flower dormancy can be broken with a cold storage treatment.

Flower longevity.—Good postproduction longevity; sterile flowers maintain good substance for about six weeks on the plant, sterile flowers persistent; fertile flowers last for a few days on the plant, fertile flowers not persistent.

Quantity of flowers.—Freely flowering habit; about 250 sterile flowers per panicle and about 70 fertile flowers per panicle.

Panicle height.—About 9.3 cm.

Panicle diameter.—About 15.2 cm.

Panicle peduncles.—Length: About 5.8 cm. Diameter: About 3.5 mm. Strength: Strong. Aspect: Primary peduncles, mostly erect; lateral peduncles, about 40° from primary peduncle axis. Texture: Densely pubescent. Color: Close to 145C to 145D; at the nodes, slightly tinged with close to 183D.

Sterile flower buds.—Length: About 7 mm. Diameter: About 1.2 cm. Shape: Irregular and broadly cup-shaped. Color: Close to 70C.

Fertile flower buds.—Length: About 5 mm. Diameter: About 5 mm. Shape: Globular. Color: Close to 63B.

Sterile flower diameter.—About 2.2 cm to 4.6 cm.

Sterile flower depth (height).—About 0.8 cm to 2.2 cm.

Fertile flower diameter.—About 9 mm.

Fertile flower depth (height).—About 6 mm.

Petals, sterile flowers.—Quantity and arrangement: Four in a single whorl. Length: About 4 mm. Width: About 2.25 mm. Shape: Broadly ovate, concave. Apex: Acute. Base: Cuneate. Margin: Entire. Texture and luster, upper and lower surfaces: Smooth, gla-

brous; matte. Color: When opening and fully opened, upper surface: Close to N66C and N66D; towards the margins, close to 75D; towards the base, close to N155A; color does not change with subsequent development. When opening and fully opened, lower surface: Close to 78B; towards the margins, close to 75D; towards the base, close to N155A; color does not change with subsequent development.

Petals, fertile flowers.—Quantity and arrangement: Five in a single whorl. Length: About 4 mm. Width: About 2.25 mm. Shape: Ovate, concave. Apex: Acute. Base: Cuneate. Margin: Entire. Texture and luster, upper and lower surfaces: Smooth, glabrous; matte. Color: When opening and fully opened, upper surface: Close to N66C and N66D; towards the margins, close to 75D; towards the base, close to N155A; color does not change with subsequent development. When opening and fully opened, lower surface: Close to 78B; towards the margins, close to 75D; towards the base, close to N155A; color does not change with subsequent development.

Sepals, sterile flowers.—Quantity and arrangement: Typically four, or occasionally five, in a single whorl. Length: About 1.7 cm. Width: About 2.2 cm. Shape: Reniform. Apex: Shallowly retuse to rounded. Base: Truncate to short acuminate. Margin: Entire; coarsely undulate. Texture and luster, upper and lower surfaces: Smooth, glabrous; matte. Color: When opening, upper surface: Close to 63B. When opening, lower surface: Close to 64D. Fully opened, upper surface: Close to 63B and 63C; with subsequent development, color becoming closer to N66D; when treated with aluminum sulfate or “blued”, color becoming closer to 96B. Fully opened, lower surface: Close to 64D; with subsequent development, color becoming closer to 63 C; when treated with aluminum sulfate or “blued”, color becoming closer to 96C.

Sepals, fertile flowers.—Quantity and arrangement: Five in a single whorl. Length: About 1.75 mm. Width: About 1.25 mm. Shape: Broadly ovate. Apex: Broadly acute. Base: Broadly cuneate. Margin: Entire. Texture and luster, upper and lower surfaces: Smooth, glabrous; matte. Color: When opening and fully opened, upper surface: Close to 63C; color does not change with subsequent development. When opening and fully opened, lower surface: Close to 65A; color does not change with subsequent development.

Pedicels, sterile flowers.—Length: About 1.8 cm. Diameter: About 1.5 mm. Strength: Moderately strong. Aspect: About 30° from main peduncle axis. Texture and luster: Moderately pubescent; matte. Color: Close to 63A.

Pedicels, fertile flowers.—Length: About 7 mm. Diameter: About 1 mm. Strength: Moderately strong. Aspect: About 10° from vertical. Texture and luster: Moderately pubescent; matte. Color: Close to 63C to 63D.

Reproductive organs, sterile flowers.—Stamens: Quantity per flower: Eight. Filament length: About 3 mm. Filament color: Close to 69C. Anther shape: Broadly oblong. Anther length: About 1 mm. Anther color: Close to 155A. Pollen amount: Moderate. Pollen color: Close to 156D. Pistils: Pistil quantity per

flower: Two or three. Pistil length: About 1.5 mm. Stigma shape: Club-shaped. Stigma color: Close to 75C. Style length: About 1 mm. Style color: Close to 73C. Ovary color: Close to 69D.

Reproductive organs, fertile flowers.—Stamens: Quantity per flower: Eight. Filament length: About 3 mm. Filament color: Close to 69C. Anther shape: Broadly oblong. Anther length: About 1 mm. Anther color: Close to 155A. Pollen amount: Moderate. Pollen color: Close to 156D. Pistils: Pistil quantity per flower: Three. Pistil length: About 1.5 mm. Stigma shape: Club-shaped. Stigma color: Close to 75C. Style length: About 1 mm. Style color: Close to 73C. Ovary color: Close to 150D.

Seeds.—To date, seed development has not been observed on plants of the new *Hydrangea*.

Pathogen & pest resistance: Plants of the new *Hydrangea* have been observed to be tolerant to *Botrytis* (*Botrytis cinerea*). To date, plants of the new *Hydrangea* have not been observed to be resistant to pests and other pathogens common to *Hydrangea* plants.

Temperature tolerance: Plants of the new *Hydrangea* have been shown to be suitable for USDA Hardiness Zones 5 through 9.

It is claimed:

1. A new and distinct *Hydrangea* plant named 'HI HORIZON' as illustrated and described.

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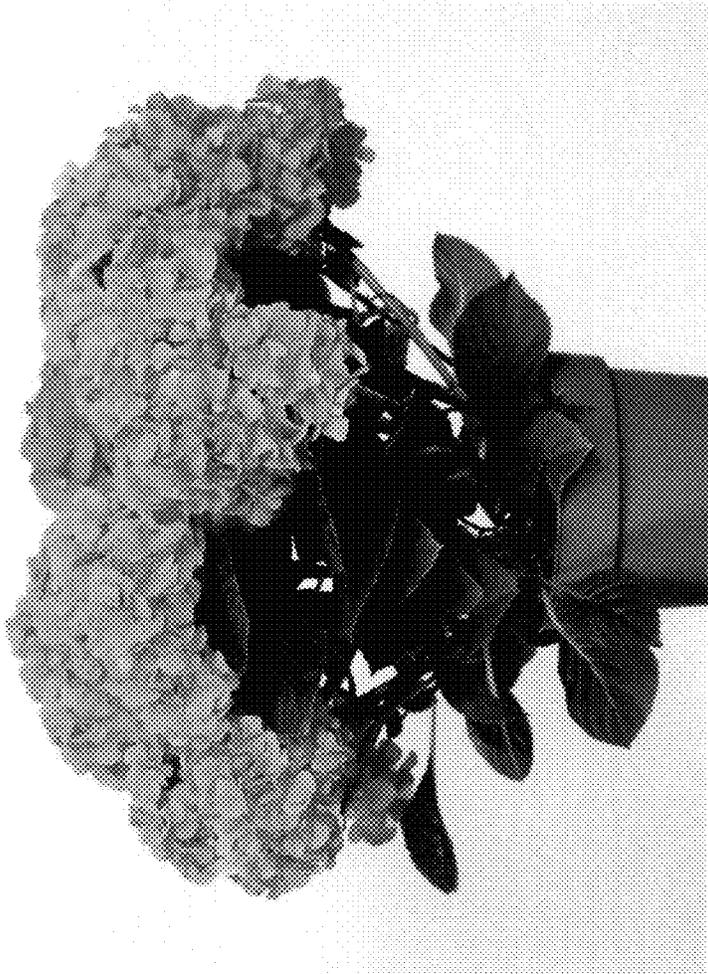


FIG. 1



FIG. 2



FIG. 3



FIG. 4